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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/589,360

08/14/2006

Ryuji Hamada

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38834

7590

01/26/2009

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EXAMINER

SLIFKA, COLIN W

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

01/26/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/589,360	Applicant(s) HAMADA ET AL.	
	Examiner COLIN W. SLIFKA	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 1-5 and 12-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-11, 17 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

This application contains claims 1-5 and 12-16 drawn to an invention nonelected with traverse in the reply filed on June 13, 2008. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-11, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada et al (US 2003/0079805) in view of Nishiuchi et al (US 6,376,089). Hamada teaches applicant's R-T-M-B rare earth permanent magnet with the same elements and ranges; and further teaches a coating formed on the magnet via use of a silicone material which carries flaky fine particles. Hamada does not specifically teach the use of a silane and/or a partial hydrolyzate thereof or more specifically trialkoxysilane or dialkoxysilane as the carrier for the particles. Nishiuchi clearly teaches the use of a fine metal powder with a carrier of vinyltriethoxysilane (col. 3, lines 1-3) to form a corrosion-resistant film for the rare earth permanent magnet. The average particle size ranges from 0.001-0.1 nanometers (col. 4, lines 9-11). Nishiuchi

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also teaches that the film formed is dense, is crack resistant, and has an excellent close adhesion to the magnet (col. 4, lines 18-37). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a silane carrier as taught by Nishiuchi as the carrier in Hamada's corrosion resistant film to provide a dense film which is crack resistant and has excellent adhesion properties.

Hamada also teaches the limitations of the particles and film of claims 8 and 9.

Regarding claim 11, Hamada teaches the treatment of the magnet's surface by methods of pickling, caustic cleaning and shot blasting.

Claims 6-11, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoshi et al (US 2003/0041920) in view of Hamada et al (US 2003/0079805). Hoshi teaches and R-T-B rare earth permanent magnet with impurities consistent with applicant's M-site metals. The ranges are within applicant's ranges, as R between 27-34 wt%, B between 0.5-2 wt%, and the balance being T (par. 28, lines 1-6). Regarding applicant's M-site metal, one example that Hoshi teaches is that the content of Al is preferably 0.02-2 wt% (par. 33, line 1). Hoshi teaches the use of silane coupling agents such as vinyltriethoxysilane and others to form a film on the magnet to aid in corrosion resistance. Hoshi does not include particles in the silane film. Hamada teaches applicant's R-T-M-B rare earth permanent magnet with the same elements and ranges and further teaches the treating of the magnet's surface with a liquid comprising a flaky fine powder of applicant's claimed elements or an alloy thereof to provide corrosion resistance. Hamada teaches that the presence of the particles is more

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resistant to heat and provides good shielding effects (pp 0027). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a flaky fine powder as taught by Hamada in Hoshi's surface treatment to provide improved heat resistance and shielding effects.

Hamada also teaches the limitations of the particles of claim 8.

Regarding claim 10, Hoshi teaches heating the magnet to 60°C (par. 73, line 4).

Regarding claim 11, Hamada teaches the treatment of the magnet's surface by methods of pickling, caustic cleaning and shot blasting. Hoshi teaches the pretreatment of the magnet with an aqueous alkaline solution (par. 71, lines 12-14).

Response to Amendment

Applicant argues that one of ordinary skill in the art would not expect from Hamada in view of Nishiuchi that the combined use of a flake fine metal powder with a silane and/or partial hydrolyzate thereof would impart improved corrosion resistance. However, both Hamada and Nishiuchi suggest the use of a silicon containing compound in combination with a fine metal powder to form a corrosion resistant film. Thus one of ordinary skill in the art would have expected that in addition to silicone resin combined with flaky fine powder to provide a corrosion resistant film, silane as taught by Nishiuchi combined with flaky fine powder can provide a corrosion resistant film.

The declaration under 37 CFR 1.132 filed November 5, 2008 is insufficient to overcome the rejection of claims 6-11 based upon Hamada in view of Nishiuchi or Hoshi in view of Hamada applied under 35 U.S.C. 103 as set forth in the last Office action

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because: the experimental results are not compared with the closest prior art which is commensurate in scope with the claims and the evidence must be weighed against evidence supporting *prima facie* obviousness in making a final determination of the obviousness of the claimed invention. In this case, as stated previously above and in the original office action, the references suggest using a combination of a flaky fine powder with silicone or silane to prove a corrosion resistant film, not the use of flaky fine powder or silane resin alone. The evidence supplied merely supports the suggestion of the prior art to use a combination of fine powder and silane resin.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fujiwara et al. teaches that silanes and silicones can be used interchangeably before heat treatment, as the end result is the same (par. 22-23).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to COLIN W. SLIFKA whose telephone number is (571)270-5830. The examiner can normally be reached on Monday-Thursday, 10:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Melvin Curtis Mayes can be reached on 571-272-1234. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/COLIN W SLIFKA/
Examiner, Art Unit 1793

CS
January 7, 2009

/Melvin Curtis Mayes/
Supervisory Patent Examiner, Art Unit 1793